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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,894	09/20/2000	Wolfgang Bachmann	Westphal.5754	6825

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EXAMINER

DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2643

16

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

129

<b>Office Action Summary</b>	<b>Application No.</b> 09/665,894	<b>Applicant(s)</b> BACHMANN ET AL.	
	<b>Examiner</b> Phylesha L Dabney	<b>Art Unit</b> 2643	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1, 10 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 4-9, 11-15, 17, 18 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 3, 16 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/20/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

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### DETAILED ACTION

This action is in response to the application filed on 10 February 2003 in which claims 2-9, 11-18, 20-23 are pending and claims 1, 10, 19 were cancelled.

#### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "criss-cross veneers" of claim 6 and "the switching element" of claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

claims  
canceled  
OK ✓

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 4-7, 9, 11-15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al (U.S. Patent No. 6,377,695) in view of Azima et al (U.S. Patent No. 6,332,029), and in view of Wright (U.S. Patent No. 4,862,011).

Regarding claims 2 and 4, Azima '695 teaches a door leaf (1, 5; col. 7, lines 12-14) with a front and rear cover panels (8) with at least one transducer (6) mounted therein, wherein the door leaf acts as a loudspeaker and includes a stiff, light structural part that maintains fed-in vibrational energy and by flexural waves propagates this energy in at least one active surface perpendicular to its thickness to distribute resonance mode vibration components over at least one surface, which has specified, preferred locations or sites within it for transducer devices, which are entirely and exclusively affixed on the structural part at one of the locations or sites to set the structural part into vibration and to allow it to resonate, thus creating an acoustic radiator that delivers an acoustic output signal when it vibrates in resonance, the front and/or rear cover panel of the door leaf being part of the stiff, light structural component. Although Azima '695 teaches the door leaf being used as a door lining in a vehicle, Azima '695 does not teach the specifics of a door comprising a door frame or door leaf. Azima '029 teaches a door (140; figs. 38-39) for a vehicle including a space for a door leaf (81) to eliminate the need bulky pistononic speakers. Since Azima '029 teaches a door for a vehicle then it is inherent for a door frame to be present and hinges to be applied between the door and door frame for opening and closing the door of the vehicle. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the door leaf of Azima '695 to be included in the door of Azima '029 and positioned in the vehicle door frame to eliminate the need for bulky pistononic speakers. In addition, the Azima references do not teach the electrical input signals conducted from the door frame to the door leaf over at least one hinge via contacts situated thereon. Wright, as shown in figure 2, teaches the electrical input conducted from the door frame to the door leaf over at least one hinge via contacts situated thereon for transmitting electrical signals,

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such as power and audio, to door components. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conduct electrical input signals to the speaker of the combination of Azima ('695, '029), in the manner taught by Wright, for the reasons stated above.

Regarding claim 5, the combination of the Azima references and Wright teaches a flexible, damping support element (Azima '695; 9, 11) situated between the front and rear cover panel.

Regarding claims 6 and 11, the combination of the Azima references and Wright teach the first transducer including an electrodynamic inertial vibration driver (6, Azima '695).

Regarding claims 7 and 18, the combination of the Azima references and Wright do not specifically teach the front and rear cover panels including multi-layer pinewood veneer. However, Azima '029 teaches making the panels of plastic materials including bonded paper laminates (col. 24 lines 8-24). It is known in the art for paper laminates to include oak, pine, etc., wood byproducts reinforced with phenolic materials to provide lightness and stiffness to a particular product, such as vehicle paneling. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use pinewood veneer materials in the panels of the Azima combination for lightness, stiffness, and aesthetic appeal for the vehicle paneling. Furthermore, it has been held that the mere duplication of essential working parts, such as the pinewood veneer, of a device involves routine skill in the art (*St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include multiple layers of the pinewood veneer in the Azima combination to increase stiffness.

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Regarding claims 9 and 17, the combination of the Azima references and Wright teaches a clamping device (Azima '695; 16) that maintains at least one of the cover panels under an adjustable tension.

Regarding claim 12, the combination of the Azima references and Wright teach using any type of exciter taught in Azima '029 including a piezoelectric driver (Azima '695; col. 4 lines 6-13 and Azima '029; col. 4 lines 51-59).

Regarding claims 13-15, the combination of the Azima references and Wright teach using panel and core material as taught by Azima '029 (Azima '695; col. 24, lines 23-32) including the acoustic sandwich core comprising nomex or aluminum honeycomb (Azima '029; col. 24 lines 48-53), or high resistance foam (Azima '029; col. 24 lines 1-7 and col. 24 lines 48-62).

3. Claims 8 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al (U.S. Patent No. 6,377,695) in view of Azima et al (U.S. Patent No. 6,332,029), in view of Bertolini et al (U.S. Patent No. 6,226,927).

Regarding claim 8, Azima '695 teaches a door leaf (1, 5; col. 7, lines 12-14) with a front and rear cover panels (8) with at least one transducer (6) mounted therein, wherein the door leaf acts as a loudspeaker and includes a stiff, light structural part that maintains fed-in vibrational energy and by flexural waves propagates this energy in at least one active surface perpendicular to its thickness to distribute resonance mode vibration components over at least one surface, which has specified, preferred locations or sites within it for transducer devices, which are entirely and exclusively affixed on the structural part at one of the locations or sites to set the structural part into vibration and to allow it to resonate, thus creating an acoustic radiator that

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delivers an acoustic output signal when it vibrates in resonance, the front and/or rear cover panel of the door leaf being part of the stiff, light structural component. Although Azima '695 teaches the door leaf being used as a door lining in a vehicle, Azima '695 does not teach the specifics of a door comprising a door frame or door leaf. Azima '029 teaches a door (140; figs. 38-39) for a vehicle including a space for a door leaf (81) to eliminate the need bulky piston speakers.

Since Azima '029 teaches a door for a vehicle then it is inherent for a door frame to be present and hinges to be applied between the door and door frame for opening and closing the door of the vehicle. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the door leaf of Azima '695 to be included in the door of Azima '029 and positioned in the vehicle door frame to eliminate the need for bulky piston speakers. In addition, the Azima references do not teach the door leaf having at least one bass reflex opening. Bertolini teaches including a bass reflex opening in the door leaf to prevent bass frequencies from being absorbed by the enclosure. Therefore, it would have been obvious to one of ordinary skill in the art to included a bass reflex opening the invention of Azima ('695, '029) to allow bass frequencies to be heard.

Regarding claim 21, the combination of the Azima references and Bertolini teaches a clamping device (Azima '695; 16) that maintains at least one of the cover panels under an adjustable tension.

Regarding claim 22, the combination of the Azima references and Bertolini having stiff, light structural part comprising nomex honeycomb structure (Azima '695; col. 24, lines 23-32, Azima '029; col. 24 lines 48-53).

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Regarding claim 22, the combination of the Azima references and Bertolini having stiff, light structural part comprising nomex honeycomb structure (Azima '695; col. 24, lines 23-32, Azima '029; col. 24 lines 48-53).

Regarding claim 23, the combination of the Azima references and Bertolini teaches a flexible, damping support element (Azima '695; 9, 11) situated between the front and rear cover panel.

#### ***Allowable Subject Matter***

5. Claims 3, 16, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

6. With respect to the applicant's comment regarding the drawing objection, the examiner is maintaining the drawing objection because the applicant has not provided a means by which to obtain his specific criss-cross pattern for his panel.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-5 PM.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

(703) 306-0377, for customer service questions.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor Receptionist).

PLD

May 4, 2003



STELLA WOO  
PRIMARY EXAMINER